

ABSTRACT

[Abstract]

[Problems] A combustion gas extraction probe that is capable of preventing burnout of a head metal portion of a probe, capable of rapidly cooling a high-temperature gas in a uniform manner in a probe, and whose outer diameter can be kept small.

[Means for Solving Problems] A combustion gas extraction probe (4) having a hollow-cylindrical inner tube (4a) in which a high-temperature combustion gas flows, a hollow-cylindrical outer tube (4b) surrounding the inner tube (4a), a low-temperature gas discharge hole (4c) provided in the inner tube (4a), and a low-temperature gas supply means (9) for supplying a low-temperature gas between the inner tube (4a) and the outer tube (4b) and discharging the low-temperature gas from the discharge hole (4c) into the direction that is substantially perpendicular to the sucking direction of the high-temperature combustion gas and is toward the center of the flow of said high-temperature combustion gas. Alternatively, plural discharge holes (4c) may be provided, where the individual discharge holes (4c) are arranged at substantially the same positions from the head of the probe in the high-temperature combustion gas sucking direction, or alternatively, the discharge holes (4c) may be arranged in stages in the high-temperature combustion gas sucking direction. The flow speeds of the low-temperature gas and the high-temperature combustion gas are preferably not less than 40 m/s and not more than 100 m/s.

[Selected Drawing] Figure 2